



# PLANT AND LIGHT INVESTIGATION

AIM:

Blank space for writing the aim of the investigation.

INDEPENDENT VARIABLE

Blank space for writing the independent variable.

DEPENDENT VARIABLE

Blank space for writing the dependent variable.



WHAT SAMPLES ARE WE TESTING?

Large blank space for describing the samples being tested.

ACCURATE MEASUREMENTS OF VARIABLES (IV, DV)

Blank space for notes on accurate measurements of variables.

VALIDITY: HOW TO CONTROL OTHER VARIABLES

Variable	How you kept it the same

RELIABILITY: CONSISTENT TRIALS

Blank space for notes on reliability and consistent trials.

EQUIPMENT DIAGRAM/NOTES

Blank space for drawing an equipment diagram or taking notes.



## METHOD

The first step in the experiment was to identify the variables that would be measured. The independent variable was the amount of time spent on the task, and the dependent variable was the number of items completed. The control variables were the type of task and the number of items. The experiment was conducted in a controlled environment to ensure that the results were not affected by external factors. The data was collected over a period of one week, and the results were analyzed using statistical methods.



## DATA COLLECTION

The data was collected using a simple spreadsheet. The columns were labeled 'Time Spent' and 'Items Completed'. The rows were labeled with the different tasks. The data was collected over a period of one week, and the results were analyzed using statistical methods.

When analyzing the data, it was found that the number of items completed was directly proportional to the time spent. This suggests that the task was completed at a constant rate.

## CONCLUSION

The results of the experiment show that the number of items completed is directly proportional to the time spent. This suggests that the task was completed at a constant rate.

These findings have implications for the design of tasks and the allocation of resources. It is important to ensure that tasks are designed to be completed at a constant rate, and that resources are allocated accordingly.

Copy or cut out the following things and glue them into the right part of your investigation worksheet.

White  
Blue  
Green  
Red  
No light

Measured the amount of water with a measuring cylinder and weighed the soil to make sure all the plants got the same resources.

1. Collect 15 radish plants and water them with 10 mL of water.
2. Measure the starting height of all the plants.
3. Place 3 plants into their own separate closet, make sure all closets are at the same temperature.
4. For closet number 1, shine normal white light onto the 3 plants.
5. For closet number 2, shine blue light onto the 3 plants.
6. For closet number 3, shine green light onto the 3 plants.
7. For closet number 4, shine red light onto the 3 plants.
8. For the last closet, don't shine any light onto the 3 plants.
9. Every day for a week, water the plants again with 10 mL of water.
10. At the end of the week, measure all the final heights of the plants.
11. Subtract the starting height from the final height to see how much the plants grow over the week.

To Investigate how light colour affects plant height.

Repeated the experiment 3 times.

Colour of the light

Height of the plant

Variable	How you kept it the same
Same amount of water	Each plant got the same amount of water each day.
Same type of plant.	A radish plant was used in all three experiments.
Same temperature	All plants were grown at room temperature.



Colour of light	Change of Height (cm)			
	Trial 1	Trial 2	Trial 3	Average
White	23	19	27	23
Blue	14	15	13	14
Green	5	5	5	5
Red	18	20	16	18
No light	2	3	1	2

The plants that were under the white light grew the most, where as the plants that grew the list was the one that had no light.

When ranking the coloured lights, the heights to lowest was red, blue, and then green.